COLUMBIA RIVER REGIONAL FORUM:
TECHNICAL MANAGEMENT TEAM

RECURRING ISSUES FACED BY THE TECHNICAL MANAGEMENT TEAM WITH POSSIBLE OPTIONS FOR RESOLUTION

Background: The Technical Management Team (TMT) has been tasked with making the technical management decisions necessary to implement the National Marine Fisheries Services Biological Opinions regarding Snake River Salmon, upper Columbia River, and lower Columbia River steelhead. The TMT Guidelines provides general directions on how disputed issues will be resolved. The overall Regional Forum process encourages the technical teams, including TMT, to work collaboratively and use best efforts to resolve issues at the technical level.

Over the past few years the TMT has been faced with issues that annually create difficulty for the team. Rather than wait until the issue has arisen as an emergency, the TMT hopes to develop a list of these problematic issues. Additionally, the group plans to develop possible options for resolution that the team will consider in its real-time decision-making process. The intent of this exercise is to urge team members to consider resolution of these issues at the earliest possible point in time. The team agreed that thoughtful analysis of these issues OUTSIDE of the emergency moment might well lead to more satisfactory resolution and results for managers, fish and the hydro system.

Process: The following list was first proposed by action agencies that sought comments and discussion with the salmon mangers. All team members are now engaged in a process to review the questions, add additional questions (if necessary) and develop additional options for resolution. This process is facilitated by the TMT Facilitator with the hope of assisting resolution in a manner which all participants feel is impartial.

THE QUESTIONS AND OPTIONS

(Note, the "possible answers" listed below are based on actual resolution of the issues at TMT, IT, or EC as reported by the Corps)

- **QUESTION A: Under what circumstances can stream flows be augmented over and beyond the BiOp seasonal flow objective level?**

Possible answers: Normally, when:

1) the reservoirs providing the additional flow (Grand Coulee, Libby, Hungry Horse and Dworshak) are still above their respective interim summer reservoir draft limits (elevations 1280, 2439,3540 and 1520 feet, respectively), *[need to clarify whether ALL of the reservoirs must be above their interim draft limits or if a particular reservoir that is above its draft limit can provide additional water. A selective drafting of a reservoir could occur since the water supply will vary in different parts of the Columbia River drainage]* and

2) it can be demonstrated that there will be a positive impact on fish travel time and overall survival, *and*
3) *at key points in the migration, while acknowledging that flows may be lower later in the migration.*

(Note: such an operation is within the project owners and operators' discretionary authority from an overall ecosystem standpoint.) *[A question was raised about the meaning of an overall ecosystem standpoint. This needs further clarification]*

- **QUESTION B: When could a turbine unit operate outside of its 1% peak efficiency flow range?**

Possible answers:

1) when TDG below the project(s) involved is (or is projected to be) at the 130% level or higher, and
2) it can be demonstrated that such an excursion would decrease TDG by at least 2% saturation as measured at the next downstream monitoring station, and
3) there is agreement that the risk associated with higher spill and higher TDG is less than the risk of direct injury to juveniles passing through the powerhouse. *[Isn't this reversed? There should be agreement that the risk to fish from higher spill and higher TDG should be greater than that associated with passage through the powerhouse to justify operation outside the 1% peak efficiency range].*

(Note: in the past, only turbine units at John Day and McNary demonstrated any potential reduction in TDG by operational excursions outside of the 1% peak efficiency) *[In 1998 there were problems with the vertical barrier screens at McNary when operations went outside of 1%]*

- **QUESTION C: When should Lower Snake River pools be allowed to be operated outside of their respective MOP operating ranges?**

Possible answers:

1) TDG in the lower Snake River must be at least at 120% or higher (or projected to be at or exceed that level)[*Q: where is the measurement being taken? At the forebay monitoring station at the next downstream dam? Needs to be clarified. Also, TDGS waiver from Washington Ecology allows up to 120% at the tailrace for controlled spill]* , and
2) The resulting reduction in spill should lead to a TDG reduction in saturation level of at least 2% at the next downstream monitoring site, and
3) Operational flexibility exists to allow reservoir drafting back to within the MOP as needed.

- **QUESTION D**: **Under what temperature conditions should fish collection and handling be curtailed or discontinued?**

Possible answers:

1) when scroll-case temperatures are approaching 70 degrees F and expected to stay at that level for more than two days, or

2) when fish survival conditions are being affected in collection and handling and holding facilities, or
4) upon recommendation from the Emergency Team *[need more definition]* or Salmon Managers, *or*
5) *when the station biologists indicate that the condition of the fish is poor and handling stress is worsening their condition.*

- **QUESTION E: When is zero or minimum nighttime flow acceptable?**

Possible answers:
1) when water temperature is less than 68 degrees F, and
2) temperature increase resulting from the operation is projected to be less than 2 degrees F *[Clean Water Act standard for facilities and actions]*, and
3) when the expected daily passage of listed adult fish is less than 1_____(do Salmon Managers have an answer?) at the projects involved, and
4) when the operation is to occur outside of the juvenile migration season ~~(April - August)~~, because of delay in fish movement resulting in increased mortality due to predation and/or improper arrival timing at the estuary *[need clarifying]* and
5) when there is no evidence of a delayed or extended juvenile fall chinook migration beyond the end of the Biological Opinion juvenile migration period..

[Need for more discussion. The 68F may be too liberal. Ditto for the 2-degree temperature gain].

- **QUESTION F: When is a pre-emptive reservoir draft to control high total dissolved gas saturation a reasonable operation?**

Possible answers:
1) when TDG are (or are projected to be) at 130% or above for an extended period (2 weeks or more) and the expected TDG reduction is no less than 5% TDG, and
2) the impact on reservoir refill to provide flow augmentation volume is not expected to be significant (no less than 80% refill probability).

[Pre-emptive drafting creates a risk that the projected runoff may not occur and refill will be compromised. Where will the 5% reduction be measured? Presumably basin-wide needs clarification]

- **QUESTION G: When is there a potential for flood control shift from Brownlee to Grand Coulee? Describe the operation and the benefit, constraints and alternatives of such an action.**

Answer: The Corps is prepared to temporarily shift Dworshak system flood control requirements starting with the initial April-to-July volume forecast prepared on January 1, if :
1) the April forecast predicts runoff at Dworshak of 3.2 maf or less, and
2) if space is available at Grand Coulee, and
3) the Bureau of Reclamation will accept the shift, and
4) the advisability of a shift has been re-evaluated with the Mid-Columbia steelhead listings and the potential effect on achieving upper rule curve at Coulee by April 10.

The flood control space will be returned to what-it-would-have-been-otherwise at both Grand Coulee and Dworshak by April 30.
[Need more discussion. The operation is defined, but the benefit, constraints and alternatives of such an action are vague.]
The Corps will compute the ability to transfer system flood control requirements from Brownlee to Grand Coulee, subject to the availability of space at Grand Coulee and the acceptance of such a shift by Reclamation. NMFS will need to coordinate a proposal for the shift that is acceptable to Idaho Power Company and the action agencies. The flood control storage that may be shifted from Brownlee to Grand Coulee will be returned to achieve what-would-have-been-otherwise by April 30.
[The format of this question is different from others in the group. More discussion at the meeting is in order to clarify]

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